

EPA SCIENCE ADVISORY BOARD
ADVISORY COMMITTEE ACTIVITY SUMMARIES
February 2001 - July 2001

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Prepared for the
July 17-18, 2001 Executive Committee Meeting
by the Committee Operations Staff
of the EPA Science Advisory Board

OVERVIEW: This document was prepared by the Committee Operations Staff (COS) to summarize recent activities of the Standing and various *ad hoc* Committees of the EPA Science Advisory Board (SAB). These summaries are designed to supplement discussions at the July 17-18, 2001 meeting of the Board's Executive Committee in Cincinnati, OH. This document includes committee summaries that cover the period since the last face-to-face Executive Committee meeting (February 5-6, 2001), a listing of COS Staff, a list of all SAB reports (full and letter size) issued during FY2001 (October 1 2000 - June 31, 2001), along with a listing of reports that are presently in progress. Final SAB reports mentioned below can be found on the SAB website (www.epa.gov/sab).

1. ADVISORY COMMITTEE SUMMARIES

1.1 Clean Air Scientific Advisory Committee (CASAC)

The Clean Air Scientific Advisory Committee (CASAC) has a statutorily mandated responsibility (under the 1977 and 1990 Clean Air Act Amendments) to review and offer scientific and technical advice to the Administrator on the air quality criteria and regulatory documents which form the basis for the national ambient air quality standards (NAAQS). NAAQS have been established for lead, particulate matter (PM), ozone and other photochemical oxidants (O₃), carbon monoxide (CO), nitrogen oxides (NO_x) and sulfur oxides (SO_x). The CASAC process normally includes review of the Office of Research and Development's (ORD) Air Quality Criteria Document (CD) for a given NAAQS, followed by a review of the Office of Air and Radiation's (OAR) Staff Paper (SP) for that NAAQS. The Criteria Document contains all the relevant scientific and technical information on the pollutant, while the Staff Paper is the bridge between the science in the criteria document and the policy decision that has to be made by the EPA Administrator. Sometimes the Committee reviews the regulatory proposal for a NAAQS prior to its promulgation. The Committee also offers research recommendations on a periodic basis, normally following its review of a particular NAAQS. The Committee is currently involved in the review cycle for PM and Carbon Monoxide; and will begin the review cycle for Ozone shortly.

a) Recent and Planned Activities

1) Particulate Matter (PM) NAAQS - a) Criteria Document/Staff Paper - A detailed peer review of the Second External Review Draft of the Criteria Document will take place July 23-24, 2001 in Research Triangle Park, NC. The Committee will also conduct a consultation on the Preliminary PM Staff Paper and the Draft PM Risk Assessment; b) PM Research Strategy - The Committee last met on June 10, 1999 and issued a report. A teleconference meeting to review the revised document is planned for late, but is not yet scheduled; c) Fine Particles - The CASAC Subcommittee for Particle Monitoring (the "Subcommittee") is providing advice to the Office of Air and Radiation on PM monitoring activities. The Subcommittee plans to hold several meetings over the next few years to respond to its developing charge and to ensure that appropriate coordination is established with the NRC Committee on particles. Most recently, the Subcommittee met on January 22, 2001 to conduct a workshop on exploring opportunities for accommodating emerging technologies into routine air monitoring networks. The workshop was advertised and convened to enable states and associations of states, vendors and manufacturers of monitoring equipment, and EPA staff an opportunity to share information and discuss emerging technologies and the implications of considering continuous monitoring in EPA's regulatory monitoring program. The full CASAC met on May 14, 2001 to approve the workshop report. A follow-up teleconference is planned for late 2001.

2) Carbon Monoxide (CO) NAAQS - In January 2000, the Committee completed its review (reaching closure) of the CO Criteria Document. A meeting on the first draft of the CO Staff Paper is planned for early 2002, but is not yet scheduled. This delay is due to the need for the Office of Air to complete work on a report to Congress on CO.

3) Ozone NAAQS - The Committee plans to review the Development Plan for the Ozone Criteria Document, the Ozone Research Strategy, and Ozone Research Needs documents at a meeting that is planned for late 2001/early 2002, probably in conjunction with the CO Staff Paper review noted above.

b) An Update on Membership for FY2002

Under the CASAC authorizing statute (1977 CAAA; 42 USC 7409), the Committee is limited to seven members. One vacancy currently exists on the seven member CASAC due to the unexpected resignation of Dr. Eva Pell of The Pennsylvania State University earlier this year. This vacancy is currently being filled (final selection has not been made at time this summary was prepared). For FY2002, three of the six current members will reach the end of their second terms (total of four years of service). These include all three statutory positions on CASAC (NAS Member; Physician; & State Air Quality Representative). At present, we intend to extend one of the three current members to an additional term to maintain continuity and to keep his particular expertise on the Committee. We will recruit replacements for the two other outgoing Members. The one-year term of the former Chair of the CASAC will expire in September 2001, as is the normal practice.

1.2 Advisory Council on Clean Air Compliance Analysis (COUNCIL)

a) Background

The Council has its origin in the requirements of Section 812 of the Clean Air Act Amendments of 1990. That section mandated that a Council be established to provide independent advice on technical and economic aspects of analyses and reports that the Agency prepares concerning the impacts of the Clean Air Act on the public health, economy, and the environment of the United States.

The Council has provided advice to the Agency in its development of two major reports: the “retrospective study,” *The Benefits and Costs of the Clean Air Act: 1970 to 1990* (submitted to Congress in October 1997) and the “first prospective study,” *The Benefits and Costs of the Clean Air Act, 1990 to 2010* (submitted to Congress in November 1999). The Council has two standing subcommittees, the Health and Ecological Effects Subcommittee (HEES) and the Air Quality Modeling Subcommittee (AQMS).

The major task for the Council in FY 2001 is to provide advice to the Agency on an “analytical blueprint” for the “second prospective study” (covering the time period 2000-2020). This process will provide an opportunity to advise on the major goals, objectives, methodologies, and analytical choices for the study before it is implemented.

b) Activities since the last EC Meeting

The Chair of the Council and its subcommittee visited staff on four key House and Senate Committees on February 21, 2001, as planned, to gather information to improve the Council’s advice on the validity and utility of EPA Section 812 Studies. Members met with staff from the House Science

Committee, House Energy and Commerce Committee, House Government Reform Committee, and Senate Environment and Public Works Committee. The members heard the following major messages:

- 1) 812 Study is used both for policy making and for political purposes. Council needs to be aware of both uses.
- 2) Congressional staff primarily reads the Executive Summary. The Summary needs to convey major messages, assumptions, and uncertainty. Needs to emphasize limitations and (in)appropriate uses.
- 3) The next 812 Study should include alternative energy scenarios.
- 4) Disaggregation desirable – but Council will have to keep in mind importance of uncertainties associated with different kinds of disaggregation (e.g., by title, provision, geographic). Agency needs to pick “what to disaggregate” carefully and be able to communicate clearly about the uncertainties
- 5) 812 Study need to communicate more about uncertainties associated with Value of Statistical Life. Suggestions included that the Council advise the Agency to report (a) address EPA’s approach to VSL, how it differs from other Agencies, and why; (b) discuss the various ways that one could deal with value of statistical life (VSL) issues and consider the Agency's rationale for using one approach versus another.
- 6) Agency needs to improve research about compliance costs.
- 7) Congressional staff would welcome a return visit from Council members as the new 812 report evolves., February as preparation for its advisory activities for the second prospective analysis. The Chair of the Council and chairs of its two subcommittees are seeking information about how the 812 studies have been used by Congress and views about how the Council can help the Agency enhance the validity and utility of future reports.

A special panel of the Advisory Council on Clean Air Compliance Analysis held a public teleconference call on June 22, 2001 to plan its review of the “analytical blueprint” for the second “prospective study” of “The Benefits and Costs of the Clean Air Act, 2000 to 2020” (study required by Section 812 of the Clean Air Act Amendments of 1990.) At the conference call, the panel members met to: (1) clarify the charge question related to the "analytical blueprint" for the third Section 812 Study; (2) request any supplemental materials from the Agency; (3) ask questions on materials already received from the Agency; and (4) and discuss preparations for a public meeting of the Council Meeting on Monday and Tuesday, July 9-10, 2001 in Washington, DC.

The Health and Ecological Effects Subcommittee of the Council conducted a public teleconference call on June 25, 2001. The purpose of the call was to provide HEES members with the opportunity to review the Agency’s proposed approach to assessment of health and ecological effects for the Second Prospective Study of the Benefits and Costs of the Clean Air Act, 2000-2020 and develop a draft response for the July 9-10, 2001 meeting of the Council on those issues.

The special panel of the Council is planning to meet on July 9-10, 2001 to develop its Advisory on the blueprint. The goal of the Council is to deliver the report to the Agency in August 2001.

c) Future Activities

The Council anticipates reviewing a draft of the “second prospective study” in the Fall of 2001 and a revised draft in the Spring of 2002.

d) An Update on Membership for FY2002

The one-year term of the former Chair of the Council will expire in September 2001; the Agency does not intend to refill that position. The term of one additional member will expire; he is eligible for renewal.

In the Federal Register notice announcing the summer Council meeting, the SAB issued a request for nominations for future members and consultants. It included a special call for “individuals with expertise in epidemiology related to air pollution effects, air quality modeling, and cost and benefit assessment as related to the effects of control of air pollution.”

1.3 Drinking Water Committee (DWC)

The EPA Science Advisory Board is mandated by the 1996 Safe Drinking Water Act (SDWA) Amendments to comment on drinking water regulations prior to promulgation. The Drinking Water Committee (DWC) carries out this mandate for the Board by reviewing various scientific and technical documents associated with the Office of Water’s SDWA regulatory activities. The DWC also reviews various drinking water research plans and products for EPA’s Office of Research and Development and observes EPA Stage 2 drinking water regulation stakeholder meetings to both learn more of this EPA approach to achieving its mission and to help the program office identify scientific and technical issues that might benefit from SAB interaction.

a) Recent Activities

1) The DWC met again in Washington, D.C. on June 12-13, 2001 to complete its review of the Contaminant Candidate List Research Plan; to consult with EPA on the development of risk assessment tools for microbiological pathogens via the water medium; and to hear of Agency plans for both of their regulatory proposals on the Long Term 2 Surface Water Treatment Rule and the Stage 2 Disinfection Byproducts rules. Both these rules are being proposed in conformance to the principles of agreement that emerged from a two-year long stakeholder interaction among EPA and a broad group of representatives from the environmental, public health, drinking water supplier, and technology communities.

The DWC came to a number of conclusions on the CCL Research Plan and these form the core of the report to the Administrator on the topic. A major concern noted during the meeting was the absence of criteria in the agency’s plan for determining when a contaminant moved from one phase of the research process to another and from the research process to the regulatory decision (either not to regulate or to regulate in some specific manner). The Consultation with EPA was report to be very useful by a representative of the Office of Science and Technology of the EPA Office of Water.

b) Future Activities

The Committee is in the process of preparing for the September 25-26, 2001 meeting at which the Long Term 2 Surface Water Treatment Rule and the Stage 2 Disinfection Byproducts Rule will be considered pursuant to Section 1412(e) of the Safe Drinking Water Act which require EPA to request comments from the SAB on its National Primary Drinking Water Regulations prior to proposal.

The Drinking Water Committee is in the process of planning its agenda for FY 2002. The Office of Water nor the Office of Research and Development have submitted project to the Board for 2002.

c) Status of Reports in Progress

The report on the Contaminate Candidate List Research Plan is being prepared for delivery to the Administrator. It is currently on the slow track due to efforts being applied to the Arsenic benefits review.

d) An Update on Membership for FY2002

There are four anticipated vacancies for the Committee as of September 30, 2001. This includes two members who specialize in toxicology, one in risk assessment/decision analysis, and one microbiologist. In addition, two Members are due for renewal or replacement (one toxicologist and one microbiologist).

1.4 Ecological Processes and Effects Committee (EPEC)

a) Activities since the last Executive Committee meeting

The Ecological Processes and Effects Committee formed a special panel to review the Water and Watersheds portion of the Agency's Science to Achieve Results (STAR) Program. The Water and Watersheds Request for Applications is one of several special grant competitions conducted jointly with EPA, NSF, and USDA. Total grants awarded under STAR WW have totaled approximately \$35 million. In recent years, the RFA has required that all projects include physical, ecological, and social science research components. The Panel held a series of meetings in April and June, including a meeting April 20 in San Francisco held in conjunction with a STAR Waters and Watersheds Progress Review organized by EPA. The Panel's draft report, expected in July, will discuss the STAR WW's contributions to integrated, multi-disciplinary research on watersheds, including the human dimensions of watersheds, and will recommend a series of mid-course adjustments to the program. The SAB review comes on the heels of last year's joint SAB/BOSC review of the overall STAR Program (EPA-SAB-EC-00-008) and an evaluation by the U.S. Government Accounting Office (GAO), released last summer.

b) Future Activities:

On July 18-20, 2001, the Committee will meet in Cincinnati, OH to conduct two reviews:

(1) draft guidance on ***Planning for Ecological Risk Assessment: Developing Management Objectives***, developed by a technical panel of the EPA Risk Assessment Forum to guide the planning phase that precedes ecological risk assessment. The guidance is intended primarily to help decision-makers work with risk assessors, stakeholders, and other analysts to plan for ecological risk assessments that will effectively inform the decisions they need to make.

(2) the **Southeastern Ecological Framework** is a GIS-based decision model that uses a series of data layers to identify optimal ecological areas in the Southeast and connecting "greenways" or habitat corridors. The Committee will evaluate the mix of data layers and the model for integrating them, as well as possible applications of the approach in other areas of the country.

The Committee also intends to release a draft of its strategic project, A Framework for Reporting on Ecological Condition. Following release of a public draft for Executive Committee review, the Committee will identify follow-up activities, including briefings with Agency offices (e.g., ORD, OIG, OEI, OW) on how the reporting framework might improve information collection, management, and communication.

c) An Update on Membership for FY2002:

Five members of the Committee have terms ending September 30, 2001. Of these, two will have served six years and will not be reappointed. An additional opening on the Committee has resulted from the resignation earlier this year of Dr. Real due to the press of other duties. Expertise areas that will be needed include ecological modeling, ecological risk assessment, and stream/aquatic ecology.

1.5 Environmental Economics Advisory Committee (EEAC)

The EPA Science Advisory Board's Environmental Economics Advisory Committee is responsible for reviewing and providing advice on a number of economic analysis initiatives at the EPA. Included are efforts to help the Agency develop high quality economic research plans and efforts to help the Agency develop improved environmental economic analysis procedures and guidelines.

a) Activities Since the Last EC Meeting

The Environmental Economics Advisory Committee (EEAC) met in Alexandria, Virginia on May 25, 2001. The purpose of the meeting was to: 1) Consult with EPA representatives on the agency's planned activities to develop analytical approaches for the implementation of Executive Order 13141 which addresses environmental reviews for Trade Agreements; 2) discuss EPA's intention to determine whether it should request that EPA and the EPA Science Advisory Board conduct a joint workshop on ways to estimate the benefits from premature mortality risk reductions that are predicted to result from environmental regulations; and 3) receive a briefing by EPA representatives on BEN, the Agency's economic benefit recapture approach for enforcement purposes.

Mr. Thomas Gibson, Associate Administrator for Policy, Economics, and Innovation and Counsel to the Administrator, was the special guest speaker for this meeting of the EEAC. Mr. Gibson focused on four issues in his remarks: 1) EPA's initiatives directed toward improving the regulatory development process, 2) new informational requirements for all US Government regulations because of energy concerns, 3) trade and the environment, and 4) a request to SAB to form a panel to review EPA's existing benefits analysis for arsenic rulemaking in drinking water.

During the meeting the EEAC panelists engaged with EPA representatives in a Consultation on Agency plans for a Trade and Environment Analysis Model (TEAM) to implement EPA's responsibilities within the overall Executive Order that requires an early environmental review of trade agreements. They also discussed a number of research topics that EPA would like to pursue in this area. Joining EPA representatives and the Panel for the Consultation was Dr. David Walters of the US Trade Representative's Office, and consultants to the EEAC, Dr. Scott Barrett and Dr. Arik Levinson. Individual members reflected an interest in some further interaction with EPA on this topic in the future.

Members discussed the continuing need to interact with EPA on how to evaluate the benefits of premature mortality risk reduction that results from environmental regulation. Past interactions on this topic have occurred in the Committee's review of EPA's guidelines for economic analysis and EPA's "white paper" on the value of premature mortality risk reduction. The issue was also highlighted in a December, 2000 letter to Dr. Robert Stavins, Chair of the EEAC, from the EPA Assistant Administrator for Air and Radiation. The issue is also the key concern that is embedded in the benefits assessment that EPA has done for arsenic and for which they have requested an SAB review. The full committee will plan to continue to engage with EPA on the longer term issues associated with this topic during the Fall of 2001. In addition, some members of the EEAC will be asked to join the SAB Panel that will be formed to respond to the Agency request to review arsenic benefits analysis.

EPA withdrew one topic from the EEAC's May 25 agenda one day prior to the meeting. That was the interaction on BEN, a model used by EPA to calculate the economic benefits from failure to comply with environmental laws. EPA will reactivate their request to the SAB for a review of changes to BEN after their new Assistant Administrator is appointed. The issue has high public interest, having had four requests to make a public comment even though the topic was on the agenda for consideration of whether the SAB would take on the review. In their written submissions to the SAB prior to the meeting, each of the four commenters urged the SAB to take on the review in a broader context than that proposed by EPA. Even though the agency withdrew the topic and did not send a representative, Dr. Stavins allowed those who desired to make their public statements to do so given the last minute withdrawal of the topic. Three of the scheduled commenters chose to make their comments for the record.

b) Future Activities

A meeting is being scheduled for September 2001 to allow the EEAC and the Agency to further engage on their long term plans for their interaction on the benefits of mortality risk reduction. The Committee Chair and DFO are discussing the potential agenda for that meeting. An early September date is anticipated.

c) Status of Reports in Progress

All of the Committee's reports have been forwarded to the Administrator.

d) An Update on Membership for FY2002

There are three anticipated vacancies for the Committee as of September 30, 2001. In addition, four Members are due for renewal or replacement.

1.6 Environmental Engineering Committee (EEC) (prepared June 28)

a) Activities since the last EC Meeting in April 2001 -

- 1) The Environmental Engineering Committee held public conference call meetings on May 5 and July 11. At those meetings the Committee
 - (a) was briefed on the activities and plans of its Subcommittees
 - (b) charged members with development of FY2002 initiative proposals on
 - i. sources of PM2.5
 - ii. contaminated sediments
 - (c) was briefed on ONR's research program relating to sediments
 - (d) was briefed on some of EPA's sustainability programs
- 2) The Subcommittee on Industrial Ecology and Environmental Systems Management met by public conference call meetings April 18, May 22, and July 10 to further preparation of its commentary on industrial ecology.
- 3) The Surface Impoundments Study Subcommittee met by public conference call meeting on June 26, 2001. The primary purpose of the conference call was to clarify and agree upon the charge for the review.

- 4) The report on EPA's Monitored Natural Attenuation research program was transmitted to the Administrator.

b) Future Activities:

- 1) The Environmental Engineering Committee will hold two more conference call meetings September 5, and November 7, 2001. The purposes of these calls will be to:
 - (a) be briefed in various environmental management systems activities by
 - i) Greg Allen of Region III
 - ii) Will Garvey of OECA
 - iii) Gary Johnson of the Quality Staff on the ISO 19011 auditing standard
 - iv) Pete Andrews of UNC
 - (b) be briefed on Subcommittee activities
 - (c) consider reports for approval as they become available
 - (d) plan the FY2002 EEC agenda, including the November 17-19 meeting
(The Committee will discuss whether to explore the connection of industrial ecology to sustainability at its next face-to-face meeting.)
- 2) The Environmental Engineering Committee plans to meet face-to face in Washington, DC November 27-29, 2001
- 3) The EEC's Surface Impoundments Subcommittee will hold conference call meetings July 19 and August 27 in preparation for a face-to face meeting September 17-19, 2001.

c) An Update on Membership for FY2002

The EEC is one of the most versatile and innovative Committees on the SAB. The members are eclectic and pragmatic in the ranges of topics they cover. They led the efforts of the SAB in dealing with issues surrounding computer models and strategic planning, introduced "the Commentary" as a device for providing advice, and have a long history of undertaking initiatives. They have a strong cross-disciplinary bent, often participating in reviews led by other Committees or inviting participation by other Committees in EEC-led reviews.

Because Dr. Inyang's period as chair ends September 30, FY2002 will see a change in the leadership of the EEC. The EEC consists of ten members of whom 2-3 are usually generalists or people of related non-engineering backgrounds (such as physicists or chemists) and the remainder have backgrounds in various engineering disciplines and environmental media.

1.7 Environmental Health Committee (EHC)

The Environmental Health Committee (EHC) has not met since the last EC meeting.

The EHC will meet jointly with the IHEC immediately after this EC meeting (July 19-20 in Cincinnati, OH) to review the ORIA's proposed methodology for developing a risk-based ranking of indoor air pollutants. In late 2001 or early FY 2002, the EHC, with IHEC, will review the Agency's draft research strategy on health risk assessment.

An Update on Membership for FY2002

The current appointments of four Members end on 9/30/2001, all of whom will have served for two 2-year terms. We anticipate renewed most of these for an additional term. Consequently, we do not expect significant changes in the committee's composition.

1.8 Integrated Human Exposure Committee (IHEC)

The IHEC has not met since the last EC meeting.

The IHEC will meet jointly with the EHC immediately after this EC meeting (July 19-20 in Cincinnati, OH) to review the ORIA's proposed methodology for developing a risk-based ranking of indoor air pollutants. In late 2001 or early FY 2002, the IHEC, with EHC, will review the Agency's draft research strategy on health risk assessment.

An Update on Membership for FY2002

The current appointments of three Members end on 9/30/2001, one of whom will have served for six years. We plan to appoint a new Member with the same skills as the departing member, i.e., exposure surveys targeted at food consumption, and do not otherwise expect significant changes in the committee's composition.

1.9 Radiation Advisory Committee (RAC)

The RAC has not met since the last EC meeting. Two reports (advisories on GENII ver. 2 and Radionuclides in Sewage Sludge - ISCORS) previously approved by the EC have been revised per vector comments and transmitted to the Administrator.

Planning is underway for the first in an (expected) series of reviews on the Multi-Agency Radiation Laboratory Analytical Protocols (MARLAP). A late September date is anticipated. The Chair and DFO are also working on a self-initiated project on issues in radiological risk assessment, with a possible August meeting date.

An Update on Membership for FY2002

The current appointments of seven Members of the Committee end on 9/30/2001, one of whom will reach the usual six year "cutoff." A new Member with the same skills (epidemiology/biometry) will be sought. We thus anticipate minimal change in the composition of the RAC.

1.10 Research Strategies Advisory Committee (RSAC)

The Research Strategies Advisory Committee (RSAC) is a Standing Committee of the Science Advisory Board (SAB) of the United States Environmental Protection Agency (USEPA). RSAC was convened to provide broad advice to the Administrator on research planning, management, and budget development for use by the Agency in its long-term budget planning process. RSAC provides a point of focus for the Board to consider the overall directions of intramural and extramural research programs of EPA, and it provides a forum to discuss issues that cut across Agency programs. RSAC also advises the Executive Committee and Standing SAB Committees on questions to consider in research reviews.

RSAC consists of one or more members drawn from the Standing Committees of the Board, as appropriate, augmented by consultants as needed to assure proper expertise and balance. RSAC is

requested to provide annual testimony directly to Congress on matters related to their reviews of the ORD budget and other matters.

a) Activities since the last Executive Committee meeting

The Research Strategies Advisory Committee (RSAC) met three times since the last EC meeting on March 6th & 7th, May 1st and 2nd, and June 26th and 27th. During the March meeting RSAC conducted two advisories one on research partnerships and the other on the performance aspects of multi-year plans. The Committee was also briefed on the National Program Directors program and wrote a commentary complimenting ORD on this approach to program planning. At its May meeting the Committee reviewed the President's FY '02 Science and Technology budget for EPA. The resulting report was cleared by the EC during the Dioxin meeting on May 15th in time for Dr. Seeker's May 17th testimony about the review to Congress. During the May 26th and 27th meeting RSAC worked to complete its review of implementation of the Peer Review policy at EPA and it consulted with the Office of the Chief Financial Officer and senior budget officers from EPA's program offices about the findings of its review of the FY 2002 S&T budget so the Agency could factor RSAC's guidance into its development of the FY 2003 budget request. The committee was also briefed on the Agency's science plan process, how EPA obtains, evaluates and uses science from outside the Agency, and it held a consultation with the Office of the Inspector General about how the IG might help improve the way EPA uses science.

b) Future Activities

As a result of the consultation with the OIG, the committee is planning a one-day meeting in late August to further advise the IG about how it might develop a process to improve the use of science at EPA. The committee is planning a 2-day meeting in mid-October to observe a demonstration of RaDiUS computer program developed by the RAND Corporation to capture all Federally funded research projects, to continue its S&T budget evaluation efforts (e.g. hear a wrap up of the past year, the outlook for current year and to begin to prepare for the February review of the FY 2003 budget, including an evaluation of the charge questions to address during the budget review). The Committee is also considering briefings or reviews on the Agency's Science Inventory, its multiyear research plans, and its international science collaborations.

c) An Update on Membership for FY2002

Three of the 10 members are completing a 4-year term on the RSAC. The Committee is likely to add a social scientist in FY2003.

1.11 *ad hoc* Subcommittees of the Executive Committee (EC)

1.11.1 Scientific and Technological Achievement Awards (STAA) Subcommittee

The Subcommittee met on June 11-12, 2001 to review 126 nominations for awards submitted by EPA. The panel is chaired by Dr. Herb Ward of Rice University. The Subcommittee recommended a total of 50% of the nominations for some level of recognition. Twenty-one nominations were recommended for an Honorable Mention, twenty-nine for a Level III award (\$1,000 divided among the EPA eligible authors); eleven for a Level II award (\$2,500), and two for a Level I award (\$5,000). The report of that review is under EC consideration at this meeting, along with a Commentary on the STAA process. In accordance with instructions from the EC (at the meeting held in RTP last year) to broaden

the exposure of this program, we will invite the authors of the two Level I awards to present their findings to the EC (and others) at the next available meeting.

1.11.2 SAB/EPA Workshop on the Benefits of Reductions in Exposure to Hazardous Air Pollutants: Developing Best Estimates of Dose-Response Functions

The SAB has finalized the substance of the memo summarizing the Workshop held on June 22-23, 2000 to improve methods for characterizing benefits associated with environmental programs that protect against air toxics. It is working with the Office of Air and Radiation to obtain the signature of the Director of the Office of Air Quality Planning and Standards. The goal of the memorandum is to improve benefits assessment for the Agency's analyses of air toxics, as required by Section 812 of the Clean Air Act Amendments of 1990.

1.11.3 EPA/SAB Workshop on the Benefits of Reducing Hazardous Air Emissions: Improving Exposure Estimates

The SAB staff work on designing this workshop has been overtaken by events and there is no longer an immediate need for the workshop to happen. Given the scheduling of the SAB review of the National-Scale Air Toxics Assessment (NATA - see below) and the development of that report (which were to have provided input for the Workshop prior to the Agency's development of the second 812 prospective study on the Cost and Benefits of the Clean Air Act, 2000-2010), the exposure scientists and economists associated with the Advisory Council on Clean Air Compliance Analysis are focusing on the more pressing need to provide peer advice to the Agency on its analytical blueprint for the 812 Study and the review of draft reports.

1.11.4 SAB/EPA Workshop on Understanding Values, Attitudes, and Decision Factors Related to Ecological Risk Management

On May 23-24, 2001, EPA and the EPA Science Advisory Board co-sponsored a public Workshop on "Understanding Public Values and Attitudes Related to Ecological Risk Management." The workshop was not an advisory committee meeting, organized with the purpose of providing advice to the Agency. Instead, it was a public meeting designed to demonstrate how researchers using different kinds of analytical methods, tools and approaches from the social sciences can mutually inform each other and risk managers in understanding: (a) public values and attitudes related to specific threats to ecological resources, such as Tampa Bay Estuary, a water body threatened with nitrogen deposition and (b) the significance of those values to decision makers.

The workshop was chaired by Dr. Baruch Fischhoff of Carnegie Mellon University. Dr. William Glaze opened the workshop with comments welcoming the audience. Dr. Milton Russell, of the University of Tennessee described how the workshop was linked to the EPA Science Advisory Board's report, *Toward Integrated Environmental Decision -Making* and how it was designed to address persistent problems that risk managers face in protecting ecological resources. The Senior Scientist from Tampa Bay Estuary, Ms. Holly Greening, characterized the risk assessment and risk management problems facing the Bay. Four researchers from different social science traditions then presented research strategies to aid managers in understanding the values and attitudes of people interested in and affected by the bay, and specifically by the problem of air deposition of nitrogen to the bay. Presenters were: Dr. Terry Daniel, Department of Psychology, University of Arizona, Tucson, Arizona; Dr. Robin Gregory, Decision Research, North Vancouver, B.C., Canada; Dr. Willett Kempton, College of Marine Studies, University of Delaware, Newark, Delaware; and Dr. James Opaluch, Department of Environmental and Natural Resource Economics, University of Rhode Island, Kingston, Rhode Island.

A managers' panel on the second day addressed the question of the opportunities and issues presented by the research proposals described. The panel consisted of managers from local and state governments and from EPA headquarters and EPA's Region 4, the region for Tampa Bay.

The Workshop was co-sponsored by EPA's Office of Air and Radiation; the National Center for Environmental Economics in the Office of Policy, Economics and Innovation; the Office of Research and Development, the Office of Water; and the Office of the EPA Science Advisory Board. One hundred and eleven people participated in the workshop in the course of the two-day event.

The Chair has completed a "Sense of the Meeting Summary." A full description of the Workshop, including the research proposals presented, will appear on the SAB website.

1.11.5 Dioxin Re-assessment Review Subcommittee (DRRS) of the Executive Committee

On May 15, the Executive Committee met in special session to review the final report of the DRRS. After considerable discussion, the EC approved the report, subject to revisions to be accomplished to the satisfaction of the three voters (Drs. Anderson, Greer, and Morgan). Following these revisions, the report was finalized and transmitted to the Administrator on May 30, 2001.

1.11.6 National-Scale Air Toxics Assessment (NATA) Review Panel

The NATA is an Agency plan for gaining a nation-wide assessment of the inhalation health posed by 32 hazardous air pollutants and diesel. The NATA Review Panel Chair is Dr. Mitch Small. A pre-meeting conference call was held Feb. 21, 2001 followed by a face-to-face meeting in North Carolina on March 20-21. A series of conference calls were held to prepare the draft NATA advisory. These conference calls were held on April 24, May 14 & 25, and June 13th. The NATA Review Panel created its first public draft on June 6th, and distributed it to the public via the SAB website in a PDF format so everyone could refer to the same page and line number format. The public offered comments at the March and June meetings.

This project is of major importance to the Office of Air and Radiation (OAR). The NATA Review Panel is planning on issuing a second public draft in July, and to hold a closure conference call in late July/early August to complete its edits and forward the draft report to the SAB's Executive Committee shortly thereafter.

1.11.7 Arsenic Benefits Rule Review Panel

The Arsenic Rule Benefits Review Panel will meet on July 19-20, 2001 to review the Agency's report *Arsenic in Drinking Water Rule Economic Analysis* (EPA 815-R-00-026; December 2000). In order to ensure that the SAB's recommendations are fully considered in decision making, the Agency has asked for a report to be made available to the Administrator in August 2001 to coincide with the findings and recommendations from independent reviews of the health effects by the National Academy of Sciences and costs by the National Drinking Water Advisory Council.

Studies have linked long-term exposure to arsenic in drinking water to cancer of the bladder, lungs, skin, kidney, nasal passages, liver, and prostate. Non-cancer effects associated with arsenic ingestion include effects to the cardiovascular, pulmonary, immunological, neurological, and endocrine (e.g., diabetes) systems. The current standard of 50 ppb was set by EPA in 1975, based on a Public Health Service standard originally established in 1942. A March 1999 report by the National Academy of Sciences concluded that the current standard does not achieve EPA's goal of protecting public health and should be lowered as soon as possible.

The Safe Drinking Water Act, as amended, 1996, (SDWA) requires EPA to revise the existing 50 parts per billion (ppb) arsenic standard. In response to this mandate, the Agency published a standard of 10 ppb to protect consumers against the effects of long-term, chronic exposure to arsenic in drinking water on January 22, 2001. The rule is significant in that it is the second drinking water regulation for which EPA has used the discretionary authority under §1412(b)(6) of the SDWA to set the Maximum Contaminant Level (MCL) higher than the technically feasible level, which is 3 ppb for arsenic -- based on a determination that the costs would not justify the benefits at this level. The January 22, 2001 arsenic rule is based on the conclusion that a 10 ppb MCL maximizes health risk reduction at a cost justified by the benefits.

The January 22, 2001 rule will apply to all 54,000 community water systems and requires compliance by 2006. A community water system is a system that serves 15 locations or 25 residents year-round, and includes most cities and towns, apartments, and mobile home parks with their own water supplies. EPA estimates that roughly five percent, or 3000, of the community water systems, serving 11 million people, will have to take corrective action to lower the current levels of arsenic in their drinking water. The new standard will also apply to 20,000 “non-community” water systems that serve at least 25 of the same people more than six months of the year, such as schools, churches, nursing homes, and factories. EPA estimates that five percent, or 1,100, of these water systems, serving approximately 2 million people, will need to take measures to comply with the January 22, 2001 rule. Of all of the affected systems, 97 percent are small systems that serve fewer than 10,000 people each.

Following the January 22, 2001 Federal Register promulgation of the arsenic rule, a number of issues were raised to EPA by States, public water systems, and others regarding the adequacy of science and the basis for national economic analyses informing decisions about the rule. Because of the importance of the arsenic rule and the national debate surrounding it related to the science and economic analyses that inform the decision, EPA's Administrator publicly announced on March 20, 2001, that the Agency would take additional steps to reassess the scientific and economic issues associated with this rule, to gather more information, and to seek further public input on each of these important issues.

Key stakeholder concerns on the benefits component of the economic analysis include the following issues: (1) the timing of health benefits accrual (latency); (2) the use of the Value of Statistical Life as a measure of health benefits; (3) the use of alternative methodologies for benefits estimation; (4) how the Agency considered non-quantifiable benefits in its regulatory decision-making process; (5) the analysis of incremental costs and benefits; and (6) the Agency's assumption that health risk reduction benefits will begin to accrue at the same time costs begin to accrue.

The Panel has been asked: a) How should total benefits and costs and incremental benefits and costs be addressed in analyzing regulatory alternatives to ensure appropriate consideration by decision makers and the public? b) How should latency be addressed in the benefits estimates when existing literature does not provide specific quantitative estimates of latency periods associated with exposure to arsenic in drinking water? c) Should reduction/elimination of exposure be evaluated as a separate benefits category, in addition to or in conjunction with mortality and morbidity reduction? d) How should health endpoints (other than bladder and lung cancer) be addressed in the analysis, when [existing] literature does not provide specific quantification, to ensure appropriate consideration by decision makers and the public? and e) How should uncertainties be addressed in the analysis to ensure appropriate consideration by decision makers and the public?

2. ADVISORY COMMITTEE OPERATIONS

2.1 Committee Operations Staff (with Principal Committee assignments noted)*

Team Leader: Bob Flaak (CASAC)

Designated Federal Officers: Stephanie Sanzone (EPEC), Kathleen Conway (EEC), Angela Nugent (COUNCIL), Sam Rondberg (IHEC, EHC & RAC), Tom Miller (DWC & EEAC), and Jack Kooyoomjian (NATA Subc).

Management Assistants: Wanda Fields (DWC, RSAC & EEAC), Dorothy Clark (EHC, IHEC & RAC), Diana Pozun (EC), Mary Winston (EPEC & EEC), and Rhonda Fortson** (CASAC & COUNCIL)

Other Committee Staff: Jack Fowle (DFO - RSAC) and Don Barnes (DFO - EC); and Betty Fortune (Support for EC).

* assignments as of June 31, 2001

** Welcome to Ms. Rhonda Fortson who joined us in late June as the new Management Assistant for CASAC and the COUNCIL. Rhonda comes to us from EPA's Athens, GA Lab.

2.2 Reports Issued this Fiscal Year (in chronological order) (R) = Full Reports; (L) = Letter Reports; (A) = Advisories; (C) = Commentaries; (N) = Notification of a Consultation

November:

- a) EPA Science Advisory Board (SAB) Commentary Resulting from a Workshop on the Diffusion and Adoption of Innovations in Environmental Protection (EEC) (C)

December:

- a) Arsenic Proposed Drinking Water Regulation: An EPA Science Advisory Board Review of Certain Elements of the Proposal (DWC) (R)
- b) Clean Air Scientific Advisory Committee (CASAC) Review of EPA's Health Assessment Document for Diesel Exhaust (EPA 600/8-90/057E) (R)

February:

- a) EPA's Proposed Approach for Evaluating Occurrence and Risks of Technologically Enhanced naturally Occurring Radioactive Material (TENORM) - An SAB Advisory (RAC) (A)

May:

- a) Monitored Natural Attenuation: USEPA Research program – An EPA Science Advisory Board Review (EEC) (R)
- b) FY2002 Presidential Science & Technology Budget Request for the Environmental Protection Agency: An SAB Review (RSAC) (R)
- c) Dioxin Reassessment - An SAB Review of the Office of Research and Development's Reassessment of Dioxin (EC Subc) (R)
- d) EPA Science Advisory Board Commentary on National Program Directors in ORD for Managing Large Crosscutting Programs (RSAC) (C)
- e) Exploring Opportunities for Accommodating Emerging Technologies for Continuous Monitoring in Routine Air Monitoring Networks - A Commentary Stemming from a CASAC/Agency Workshop (CASAC) (C)
- f) Notification of a Consultation on Office of Research and Development's National Program Director Program (RSAC) (N)
- g) Notification of a Consultation on Multi-year Planning and Performance Metrics

- for Science at EPA (RSAC) (N)
- h) Trade and the Environment - an EPA SAB Notification of a Consultation (EEAC) (N)

June:

- a) GENII Ver. 2 Environmental Radiation Dosimetry System: An SAB Advisory (RAC) (A)
- b) Radionuclides in Sewage Sludge: An SAB Advisory (RAC) (A)

2.3 Reports in Progress (R) = Full Reports; (L) = Letter Reports; (A) = Advisories; (C) = Commentaries, (N) = Notification of a Consultation

For EC Review on July 17-18:

- a) FY00 Scientific & Technological Achievement Award Recommendations (EC Subc) (R)
- b) Process Improvements for STAA (EC Subc) (C)
- c) New Approaches to Stakeholder Involvement (EC) (C)

For EC Review at a later date:

- a) A Framework for Reporting on Ecological Condition (EPEC) (R)
- b) STAR Program for Waters and Watersheds (EPEC) (R)
- c) Risk Reduction Options - IRP (EEC) (R)
- d) Industrial Ecology (EEC) (C)
- e) National Scale Air Toxics Assessment (NATA) (EC Subc) (R)
- f) Candidate Contaminant List Research Plan (DWC) (R)
- g) Review of EPA Peer Review Program (RSAC) (C)
- h) Environmental Systems Management Research (EEC) (N)

Not Subject to EC Review (CASAC/COUNCIL):

None at this time

Approved by EC and undergoing completion:

- a) Measures of Technology Performance (EEC) (C)

2.4 Staff Contact Information

For further information concerning any committee, please contact the relevant staff as noted below. Phone numbers are as follows (area code 202 for all numbers, unless otherwise noted):

Don Barnes	564-4533	Betty Fortune	564-4533
Jack Fowle	564-4547	Dorothy Clark	564-4533
Robert Flaak	564-4546	Wanda Fields	564-4533
Jack Kooyoomjian	564-4557	Diana Pozun	564-4533
Tom Miller	564-4558	Mary Winston	564-4533
Angela Nugent	564-4562	Rhonda Fortson	564-4563
Sam Rondberg	(301) 812-2560		
Stephanie Sanzone	564-4561		
Kathleen White	564-4559		

Fax for all Committee Operations Staff is: (202) 501-0582
(except for Sam Rondberg whose fax is (410) 286-2689).

E-mail for all EPA staff is: LASTNAME.FIRSTNAME@EPA.GOV (Except for Sam Rondberg whose e-mail is: SAMUEL717@AOL.COM).

2.5 Current Staffing Alignments:

Executive Committee	Don Barnes	Diana Pozun w/assistance by Betty Fortune
NATA	Jack Kooyoomjian	Betty Fortune
CASAC	Robert Flaak	Rhonda Fortson
COUNCIL	Angela Nugent	Rhonda Fortson
DWC	Tom Miller	Wanda Fields
EEAC	Tom Miller	Wanda Fields
EEC	Kathleen Conway	Mary Winston
EHC	Sam Rondberg	Dorothy Clark
EPEC	Stephanie Sanzone	Mary Winston
IHEC	Sam Rondberg	Dorothy Clark
RAC	Sam Rondberg	Dorothy Clark
RSAC	Jack Fowle	Wanda Fields
ad hoc EC Subcommittees	-- Varies with issue and scheduling --	

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